

SOV/49-59-2-25/25

Dependence of the Refractive Index of Air on Humidity

determined given values of P, T and the corresponding refractive indices ν . The formulae of Eqs (1) and (2) are valid for dry air and cannot be strictly applied when moisture is present. Eq (2) does not allow for the effect of humidity at all. Eq (1) allows for humidity indirectly, because humidity affects the air density as given by:

$$\rho = \frac{P}{TQ} \left(1 + 0.377 \frac{e}{P} \right) \quad (3)$$

where Q is the gas constant and e is the humidity of air expressed in the form of water vapour pressure. In addition to the effect on the air density, humidity affects the refractive index directly since the refractive properties of dry and wet air are different. Vol'kenshteyn, in his treatise on molecular optics (Ref 5), shows that the refractive index of a gas may be given in the formula:

$$\nu^2 = 1 + 4\pi\omega N$$

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or approximately (within one unit in the eighth decimal place)

$$\nu = 1 + 2\pi \omega N \quad (4)$$

where N is the number of molecules in one cm^3 of a given gas, and ω is the coefficient of polarization of molecules by the electric field of a light wave, which displaces electron orbits. For dry air $\omega_c = 1.729 \times 10^{-24} \text{ cm}^3$ and for water vapour $\omega_w = 1.501 \times 10^{-24} \text{ cm}^3$; both these values are given for yellow light. The author derives the following formula which gives dependence of the refractive index ν on the humidity of air:

$$\nu = 1 + 2\pi \frac{\omega_c}{mA_c Q} \frac{P}{T} \left(1 - \frac{e}{P} + \frac{A_c \omega_w}{A_w \omega_c} \frac{\delta e}{P} \right) \quad (8)$$

where $A_c = 28.911$ and $A_w = 18.016$ are the relative molecular weights of dry air and water respectively;

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$m = 1.660 \times 10^{-24}$ g which is the unit atomic weight; $\delta = 0.623$ is the density of water vapour relative to air; the other symbols were defined earlier. Using Eq (8) it is possible to calculate the refractive index of wet air under any atmospheric conditions. Substituting into Eq (8) numerical values, including the value $Q = 2.8703 \times 10^6$ erg.deg/g for the gas constant, the author obtains for the yellow wavelengths Eq (9), where P and e are in millibars, and Eq (10), where P and e are expressed in mm Hg. For $P = 760$ mm Hg and $T = 273^\circ\text{K}$, Eqs (9) and (10) give $\gamma = 1.0002918$, which agrees with the results of the most careful determinations of the refractive index of air, such as those reported by Gil'den (Ref 4), Fuss (Ref 4), Courvoisier (Ref 4), Kaiser and Runge (Ref 3), and Kaye and Laby (Ref 6). All these workers reported $\gamma = 1.00029\dots$ which differs only in the sixth decimal place. In conclusion, the author compares the exact formulae given by Eqs (9) and (10) with the approximate expressions given by Eqs (1) and (2). The author substitutes the value of the air density

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given by Eq (3) into Eq (1) and finds that the refractive index calculated by means of Eq (1) is in error by an amount given by Eq (11) and the refractive index calculated using Eq (2) is in error by an amount given by Eq (12). Eqs (11) and (12) show that at high humidities the error in the refractive index may reach, at worst, three units in the fifth decimal place when Eq (1) is used, and two units in the fifth place when Eq (2) is used. There are 6 references, 5 of which are Soviet and 1 a translation from English into Russian.

SUBMITTED: January 2, 1958.

Card 5/5

30860. KAZANSKIY, L. and KHATUNTSEV, N.

O metodakh zamorazhivaniya pyby. Kholodil. tekhnika, 1949, No. 3, s. 25-28.

VAZANSKII, L. M.

21823 VAZANSKII, L. M. Vodushnye tonnel'nyye zorosilki intensivnoy
deystviya. Rzv. khoz-vo, 1949, No. 7, pp. 9-15.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

KAZANSKIY, L. M.

USSR/Chemical Technology. Chemical Products and Their Application -- Food industry,
I-28

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6751

Author: Kazanskiy, L. M.

Institution: None

Title: Fish Freezing Unit

Original
Publication: Ryb. kh-vo, 1955, No 6, 23-25

Abstract: Description of fish freezing unit of intermittent action having an output capacity of 2-2.5 tons per day. The unit has a holding capacity of 500 kg, and the freezing cycle is of 4 hours. The unit consists of a chamber made of heat insulating panels mounted on a metal framework and including two air coolers and an axial blower of the MU No 7 type which provide for a two-current circulation of cold air (-25°) between ten tiers of racks. The air coolers -- ribbed, direct evaporation of ammonia cells, are located at top and bottom of the unit. Over-all dimensions of the unit are 228 x 145 x 239.2 cm;

Card 1/2

L 06995-67	EWT(m)	IJP(c)	ACC NR: AP6021528	SOURCE CODE: UR/0089/66/020/006/0513/0514
AUTHOR: <u>Kolomenskiy, A. A.</u> ; <u>Kamunnikov, V. N.</u> ; <u>Kazanskiy, L. N.</u> ; <u>Ovchinnikov, Ye. P.</u> ; <u>Papadichev, V. A.</u> ; <u>Semenov, S. S.</u> ; <u>Fateyev, A. P.</u> ; <u>Yablokov, B. N.</u>				38 35 B 19
ORG: none				
TITLE: Starting of a new accelerator - symmetrical annular FM <u>synchrotron</u> of the Physics Institute im. P. N. Lebedev AN SSSR				
SOURCE: Atomnaya energiya, v. 20, no. 6, 1966, 513-514				
TOPIC TAGS: electron accelerator, synchrotron/ KF electron accelerator				
ABSTRACT: This is a brief report of the starting of a new experimental symmetrical annular FM synchrotron (KF installation). It is a strong-focusing accelerator with constant magnetic field, in which the time variation of the magnetic field is replaced by a radial increase of the field in accordance with the growth of the particle energy. The accelerator was proposed by one of the authors (Kolomenskiy, ZhETF v. 33, 298, 1957; Atomnaya energiya v. 3, 492, 1957) and its construction is described in detail elsewhere (V. N. Kamunnikov et al., in: Trudy Mezhdunarodnoy konferentsii po uskortelyam, Dubna, 1963 [Transactions of International Conference on Accelerators, Dubna, 1963] Atomizdat, 1964, p. 653). The article describes briefly the magnet, the initial operation, the accelerating system, the electron injection, and some of the preliminary results. The authors thank <u>V. S. Voronin</u> , <u>D. D. Krasil'nikov</u> , <u>A. N. Lebedev</u> , <u>O. A. Smirnov</u> , <u>V. M. Gapanovich</u> , <u>N. V. Platonov</u> , <u>G. T. Ponomarev</u> , <u>V. A. Ryabov</u> , <u>Ye.</u>				
Card 1/2	UDC: 621.384.612.4			

L 06995-67	ACC NR: AP6021528	APPROVED FOR RELEASE: 06/13/2000	CIA-RDP86-00513R000721320006-0
F. Troyanov, G. I. Kharlamova, L. N. Chekanova, and the technicians' and mechanics' group for help with the starting of the accelerator, and Professor N. A. Dobrotin for interest in the work. Orig. art. has: 2 figures.			
SUB CODE: 18/	SUBM DATE: 31Mar66/	ORIG REF: 004/	OTH REF: 001
Card 2/2 JC			

L 00015-66 EWT(m)/EPA(v)-2/EWA(n)-2 IJP(c)

ACCESSION NR: AP5021367

UR/0120/65/000/004/0217/0218
621.384.6398

26
24
B

AUTHOR: Kazanskiy, L. N.; Kanunnikov, V. N.

TITLE: Pulsed system of inductive acceleration for annular synchrocyclotrons

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1965, 217-218

TOPIC TAGS: particle acceleration, electron accelerator, MEV accelerator

ABSTRACT: The induction acceleration in electron annular synchrocyclotrons permits the production of a high mean particle beam intensity due to the constancy of the control magnetic field. An inductive system may be found useful also during numerous experiments investigating the acceleration and storage of large currents. The present article describes such a pulsed system of inductive electron acceleration with 50 cps repetition frequency developed for the electron annular synchrocyclotron of the FIAN. The machine has betatron cores made of transformer steel. Difficulties caused by a low Q-factor and low coupling coefficient are overcome by the addition of the emfs from two betatron cores. The total pulse secures a fast widening of the orbit (amplitude is 1600 V, and duration 3 μ sec) and an acceleration up to an energy of 0.5 MEV (280 V, 90 μ sec) with a subsequent trapping into the high frequency operating condition. Orig. art. has: 3 figures.

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L 00015-66

ACCESSION NR: AP5021367

2

ASSOCIATION: Fizicheskiy institut AN SSSR, Moscow (Physics Institute, AN SSSR)

SUBMITTED: 01Jul64

ENCL: 00

SUB CODE: NP

NO REF SOV: 002

OTHER: 001

Card

mlr
2/2

"APPROVED FOR RELEASE: 06/13/2000

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L 20027-A5

Card 2 of 4

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000721320006-0"

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721320006-0

YERMAKOV, A.N.; MAROV, I.N.; BELYAYEVA, V.K.; KAZANSKIY, L.P.

State of hafnium oxychloride in aqueous solutions. Zhur. neorg.
khim. 9 no.10:2354-2358 O '64.
(MIRA 17:12)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721320006-0"

KAZANSKIY, L.S.

Uncoupling of generators by means of a passive linear circuit.
Radiotekhnika. 20 no.6:24-27 Je '65. (MIRA 18:7)

1. Deyatvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva radio-
tekhniki i elektrsovyyazi imeni Popova.

KAZANSKIY, L.V., inshener.

Measuring the flow of bottom material with the aid of radioactive
tracers. Gidr.stroi. 26 no.6:45-46 Je '57. (MIRA 10:7)
(Dredging)

KAZANSKIY, L.V., inzh.

Automation of suction dredges. Mekh.i avtom.proisv. 14
no.1:52-55 Ja '60. (MIRA 13:5)
(Dredging machinery)

KAZANSKIY, L.V. [Kazans'kiy, L.V.] (Dmitrev)

Adaptive control system with two coordinates using indirect quality indices. Avtomatyka 9 no. 2:76-78 '64. (MIRA 17:5)

ACCESSION NR: AP4026846

S/0102/64/000/002/0076/0078

AUTHOR: Kazans'ky*, L. V. (Kazanskiy, L. V.) (Dmitrov)

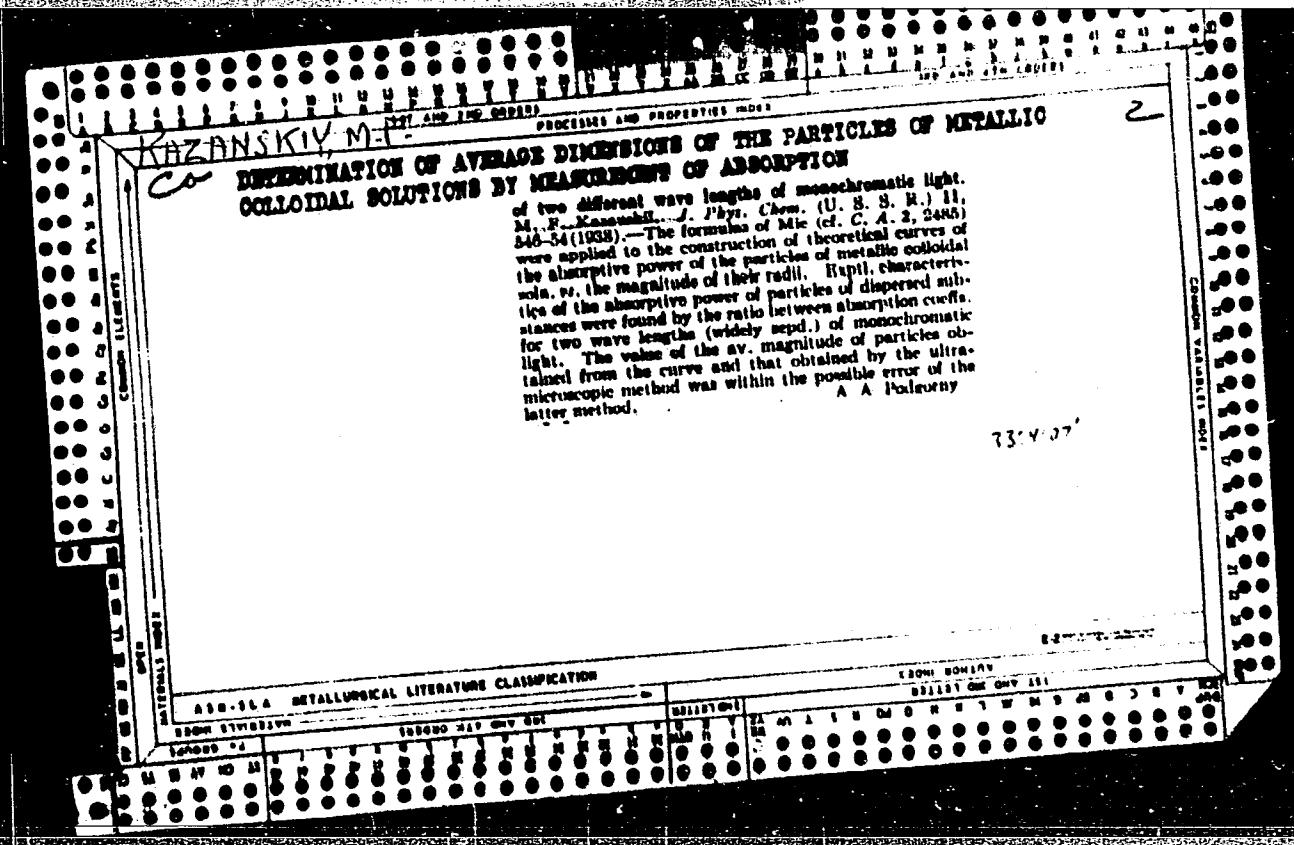
TITLE: Adaptive control system with two variables which holds the middle of the performance index

SOURCE: Avtomatyka, no. 2, 1964, 76-78

TOPIC TAGS: automatic control, adaptive automatic control, hydraulic dredge, hydraulic dredge adaptive control, 1000-80 hydraulic dredge

ABSTRACT: An adaptive control system (Author's Certificate no. 150149, "Bull. izobr., no. 18, 1962) for controlling the operation of a hydraulic dredge is proposed. Having a few sensors and actuators, the system not only permits operating in the middle of desirable modes but also maintains an optimum technico-economic performance. The middle course is chosen between two extreme - silting-up and cavitation - conditions. The system is applicable, for

Card 1/2



KAZANSKIY, M. F.

PA 46/49T103

USSR/Physics
Heat Testing

Jun 49

"Boundary Conditions in Methods of Regulated Operations," M. F. Kazanskiy, State Pedagogical Inst imeni A. M. Gor'kiy, Kiev, '6 pp

"Zhur Tekh Fiz" Vol XIX, No 6

Experimentally clarifies problems arising from technical heat testing of materials. Uses regulated operation method by partially fulfilling boundary conditions in the region of constant temperature of the medium. Sets up formulas for rectification of results obtained. Submitted 7 Jul 48.

46/49T103

KRAEANSKY M F

U S S R .

✓ Errors in the determination of heat coefficients for poor thermal conductors by the second method of the regular state. S. P. Karpinski and M. V. Vereshchagin. Zashchitnaya i tekhnicheskaya informatsiya po radioelektronike i radioelektronnoy apparature. No. 1, 1968.

KAZANSKIY, M.Y.

USSR/Fitting Out of Laboratories. Instruments,
Their Theory, Construction and Use

H.

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 4935

Author : Kazanskiy, M.F.

Inst : Kiev State Pedagogical Institute

Title : Resistance Thermometers of Low Thermal Inertia

Orig Pub : Nauk. zap. Kiiv's'k. derzh. ped. In-tu, 1954, 16,
fiz.-matem. ser., No 5, 89-96

Abstract : No abstract.

Card 1/1

- 13 -

Card 1/1

- 123 -

KAZANSKIY, M.Y.

Thermal diagrams of drying processes of capillary-porous materials
with variously adsorbed moisture. Trudy MTIPP no.8:180-191 '57.
(MIRA 10:12)

(Drying) (Soil moisture)

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000721320006-0

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000721320006-0"

• *KAZANS'KY, M.F.*

USSR / Physical Chemistry - Surface Phenomena, Adsorption,
Chromatography, Ion Interchange.

B-13

Abs Jour : Ref Zhur - Khim., No.1, 1958, No. 607.

Author : M.F. Kazans'kyy.

Inst : Kiev State Pedagogic Institute,

Title : New Method of Analysis of Moisture Bond Forms using Thermo-
grams of Isothermal Drying of Capillary-Porous Bodies.

Orig Pub : Nauk. zap. Kyiv's'k. derzh. ped. in-t, 1957, 25, 28 - 33/

Abstract : A new thermographic method is proposed for the analysis
of forms of moisture bond with a capillary-porous body,
the method being based on the study of kinetics of heat and
mass interchange during the drying process. It is shown
that the critical points on thermograms correspond to the
limits of the removal of moisture connected with the body

Card: 1/2

• APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000721320006-0"

USSR / Physical Chemistry - Surface Phenomena, Adsorption,
Chromatography, Ion Interchange.

B-13

Abs Jour : Ref Zhur Khim., No.1, 1958, No. 607.

Abstract : in various ways. The determination accuracy is 1 to 2%
at recording the thermograms with an accuracy from 0.05 to
0.1° and the curves of drying with an accuracy from 3 to
5 mg, the initial weighed sample of the dry substance being
3 to 5 g. Results of determination of gygroscopic and
bound moisture in various specimens of silica gel, acti-
vated coal, bentonite, starch, gelatin, agar and cellulose
are shown. The thermographic method, being a kinetic one,
better corresponds to the real conditions of hydrothermal
processes in engineering.

Card: 2/2

USSR / Physical Chemistry - Surface Phenomena, Adsorption,
Chromatography, Ion Interchange.

B-13

Abs Jour : Ref Zhur Khim., No.1, 1958, No. 609.

Abstract : the I does not depend on the temperature within its range from 20 to 105°, and that W_d and W_b decrease with the temperature increase. The amount of CH_3OH bound to I and the amount of moisture bound to activated coal decrease together with the temperature. The independence of W of the temperature corresponds to the independence of I moistening heat of the temperature.

Card: 2/2

OLEYNIKOV, V.N.; KAZANSKIY, M.F.

Use of the gammascopy method for studying the kinetics of motion of humidity in a capillary porous body. Inzh.-fiz. zhur. no.2:38-44 F '58. (MIRA 13:1)

1. Pedagogicheskiy institut im.Gor'kogo, laboratoriya molekul'arnoy fiziki, Kiyev.
(Soil moisture)
(Gamma rays--Industrial applications)

KAZANSKIY, M.F.; MIGLYACHENKO, A.F.

Heat coefficients and differential moisture of Pobiyanskii and
Pyzhevskii bentonites. Bent. gliny Ukr. no.2:86-93 '58.
(MIRA 12:12)

1.Kiyevskiy pedagogicheskiy institut.
(Bentonite)

KAZANSKIY M. F.

Study *to*
Kazanskiy M. F., 20 Jan 1968 (Liaison "I")
U.S. Embassy, Moscow, USSR
Dept. of State - Bureau of Political-Military Affairs
p. 2, (1968), (KI, 10-8, 1968)

KAZANSKIY, M.F.

Heat and mass transfer during clay drying. Inzh.-fiz. zhur. no.4:
17-21 Ap '58. (MIRA 11:7)

1. Pedagogicheskiy institut im. A.M. Gor'kogo, g. Kiyev.
(Heat--Radiation and absorption) (Mass transfer) (Clay--Drying)

KAZANSKIY, M.F.

Investigating the kinetics of drying natural high polymers.
Inzh.-fiz. zhur. no. 6:93-95 Je '58. (MIRA 11:?)

1. Tekhnologicheskiy institut legkoy promyshlennosti, Kiyev.
(Biological products--Drying)

24(8)

SOV/170-59-5-11/18

AUTHORS: Kazanskiy, M.F., Kulandina, A. N.

TITLE: Effect of the Form of Moisture Bonds on Heat Transfer in Typical Capillary-Porous Bodies (Vliyanie form svyazi vлагi na teploperedenos v tipichnykh kapillyarno-poristykh telakh)

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Nr 5, pp 88-92 (USSR)

ABSTRACT: The present paper describes experiments on determination of a relationship between the coefficients of heat transfer, i.e., temperature conductivity α and heat conductivity λ , of typical capillary-porous bodies on the one hand, and the forms and kinds of bonds of the moisture, contained in these bodies, on the other hand. Purified quartz sand from a river and silica gel were taken as the objects of investigation. An analysis of differential water-absorbing properties of the quartz sand was carried out by means of the curves of negative capillary pressure and thermograms of isothermal drying [Ref 1] and for silica gel, moreover, by the method of isotherms of water steam adsorption. A special laboratory device, applied for determining

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Effect of the Form of Moisture Bonds on Heat Transfer in Typical Capillary-Porous Bodies

thermal coefficients of moist materials by the method of two temperature-time points [Ref 3], is described and illustrated by Figure 1. The results of experiments are presented in graphical form in Figure 2 by two curves for each material, which express the relationships sought for. The character of variations of coefficients λ and α with changing moisture W of a porous body indicates the existence of various forms of bonds for capillary water contained in the body. There are: 1 diagram, 1 graph, 1 table and 8 references, 7 of which are Soviet and 1 German.

ASSOCIATION: Pedagogicheskiy institut imeni A.M. Gor'kogo (Pedagogical Institute imeni A.M. Gor'kogo), Kiyev.

Card 2/2

KAZANSKIY, M.F.

Thermal coefficients of some clays from the Ukraine and their dependence on the moisture bound to the solid phase in different ways. Zhur.tekh.fiz. 29 no.2:247-251 F '59. (MIRA 12:4)

1. Kiyevskiy gosudarstvennyy pedagogicheskiy institut im. A.M. Gor'kogo.
(Ukraine--Clay--Thermal properties)

KAZANSKIY, M.F., KULANDINA, A.N., LUTSIK, P.P.

Hydrothermal properties of typical colloidal, capillary-porous bodies and their relation to the form of the bond of the absorbed moisture. Inzh.-fiz.shur. no.2:67-70 P '60. (MIRA 13:7)

1. Gosudarstvennyy pedagogicheskiy institut, Kiyev.
(Colloids--Thermal properties)

KAZANSKIY, M.F.; LUTSIK, P.P.

Effect of forms of bond of absorbed moisture on the kinetics of
the hydrothermal field of a polycapillary porous colloidal solid
during drying. Inzh.-fiz.zhur. no.11:26-33 N '60. (MIRA 13:11)

1. Gosudarstvennyy pedagogicheskij institut im.A.M.Gor'kogo, Kiyev.
(Cellulose—Drying)

04258

17.4430

S/170/60/003/010/003/023X
B019/B054

AUTHORS: Oleynikov, V. N., Kazanskiy, M. F.

TITLE: II. An Investigation of the Unsteady Hydrothermal Field
of a Macroporous Body by Means of Gammascopy /9

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 10,
pp. 33 - 38

TEXT: In the previous paper (Ref. 1), the authors described the experimental equipment, and dealt with experimental results on the kinetics of the moisture content and the temperature field in a thick macroporous body. With the same equipment, they investigated the kinetics of the unsteady fields of the moisture content and of the temperature of the same macrocapillary-porous body¹⁶ in drying under harder conditions. The method suggested by the authors (Ref. 1) permits a simultaneous determination of the temperature kinetics and moisture content in some layers of the body, and thus the setting up of rules governing the heat- and mass exchange in drying. Fig. 1 graphically shows moisture contents and temperatures in various layers of the sand sample as a function of the

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II. An Investigation of the Unsteady Hydro-
thermal Field of a Macroporous Body by
Means of Gammascopy

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S/170/60/003/010/003/023X
B019/B054

drying period. Hence, it appears that the end of the period of a constant drying rate does not coincide with that of the constant temperature increase. Further, an endothermic effect is found, which follows the period of a constant rate of temperature increase. A special investigation into the nature of this endothermic effect shows that this effect sets in as soon as the moisture content has dropped to 3-5%. The greatest temperature drop is observed at a moisture of about 1%. This coincides with the removal of pendular moisture. The further investigation shows that the removal of moisture from a macroporous body depends on the state of moisture. Fig. 4 represents the drying rates as a function of the moisture content for various layers. All curves possess two critical points of different physical nature. The first one is connected with the moisture state on the surface. In all layers, the first point has the same moisture, independent of the moisture state in the other layers. The authors assume that in this point the moisture passes over from the capillary to the funicular state. M. F. Kazanskiy (Ref. 3), A. A. Isirikyan (Ref. 5), M. V. Venediktov (Ref. 7), A. S. Vasil'yev (Ref. 8), and T. G. Borodulina (Ref. 9) are mentioned. There are

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CIA-RDP86-00513R000721320006-0

KAZANSKIY, M. F., LUTSIK, P. P., and OLEYNIKOV, V. N.

"The Influence of Moisture on Non-stationary Heat and Mass Transfer in Capillary-Porous Bodies."

Report submitted for the Conference on Heat and Mass Transfer,
Minsk, BSSR, June 1961.

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721320006-0"

KAZANSKIY, M.F.

Temperature effect on the state of absorbed capillary moisture
in macroscopic pores of a disperse body. [with summary in English].
Inzh.-fiz. zhur. 4 no.3:53-57 Mir '61. (MIRA 14:6)

1. Tekhnologicheskiy institut legkoy promyshlennosti, g. Kiyev.
(Hydrostatics) (Capillarity) (Thermodynamics)

MIKHELEV, A.A.; KAZANSKIY, M.F.; DUSHCHENKO, V.P.

Comments on A.S. Ginzburg's monograph "Drying foodstuffs."
Inzh.-fiz. zhur. 4 no.9:132-133 S '61. (MIRA 14:8)
(Food--Drying)
(Ginzburg, A.S.)

KAZAN'SKII, M.F.; VERNIKOVSKAIA, A.I.

Kinetics of the coagulation of colloidal capillary-polymer
in drying. Dokl. Akad. Nauk SSSR 1961, No. 104, No. 7 p. 161.
(DRA 14:10)

1. Gosudarstvennyy pedagogicheskiy institut imeni A.N. Gorbogo,
Minsk.
(Drying)

VEREZOMSKAYA, A.L.; KAZANSKIY, M.F.

Certain characteristics of the shrinkage of clays of various minerals during drying. Inzh.-fiz. zhur. 5 no.2:104-107 F '62.

(MIRA 15:1)

1. Gosudarstvennyy pedagogicheskiy institut imeni A.M.Gor'kogo, Kiyev.

(Drying) (Clay)

L 17166-63

ACCESSION NR: AP3004297

EWT(1)/EWP(q)/EWT(m)/BDS

AFFTC/ASD: S/0170/63/006/007/0094/0097

AUTHOR: Stadnik, B. N.; Kazanskiy, M. F.

TITLE: Effect of moisture on the propagation of supersound in capillary-porous bodies

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 6, no. 7, 1963, 94-97

TOPIC TAGS: supersound, capillary-porous body, quartz sand, potato starch, absorption, adsorption

ABSTRACT: The article describes an experimental supersonic pulse apparatus (see Figure 1, Enclosure 1) for determining the velocity and speed of absorption of supersound (50-600 kilocycles) in moist capillary-porous bodies, and gives experimental curves showing their dependence upon the moisture content of 0.5-0.75 mm quartz sand and native potato starch. By means of drying thermograms it was found that the sand can hold 6.4% moisture in the dry state (at one stage of drying) and 2.4% when arranged (later) in isolated meniscus "cuffs" at points of contact between grains. Potato starch is a model of a colloidal capillary-porous body absorbing a considerable amount of moisture

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L 17166-63

ACCESSION NR: AP3004297

bound either by adsorption (34%) or by osmosis (61.6%). Measurements were made with a supersonic pulse device as shown in Fig. 1 (see Enclosure). When the quartz sand is fully saturated with water, the velocity of supersound in it is close to that of pure water, while the absorption is relatively low. When the moisture begins to be removed from the pores within the sample, air enters and the system changes from two-phase to three-phase: solid - liquid - vapor-air mixture. There is a sharp drop in the velocity and a considerable reduction in the amplitude of the pulse passing through the sample. As more water is removed, from 17% humidity to total dryness, there is a slow decline in velocity. The pulse amplitude at first increases, reaching a maximum at 6-7% moisture content (ropy moisture in the quartz sand pores). As the moisture changes from ropy to contact-point arrangement (at 2-3% moisture) there is a sharp drop in amplitude due to increase in supersound absorption. With native potato starch, the velocity at total saturation was close to that in pure water. As the moisture decreased, there was a decrease in the velocity and amplitude with a minimum in the area close to the maximum hydroscopic humidity (54-56%). Removal of the hydroscopic humidity results in a considerable decrease in supersound absorption and a small increase in velocity.

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I 17166-63
ACCESSION NR: AP3004297

as the moisture content corresponding to the maximum adsorbed moisture is approached. Orig. has 1 diagram and 2 graphs.

ASSOCIATION: Tekhnologicheskiy institut legkoy promyshlennosti, Kiev (Technological Institute of Light Industry)

SUBMITTED: 19Jun62 DATE ACQ: 08Aug63 ENCL: 001
SUB CODE: PH NO REF Sov: CO4 OTHER: 000

Card 3/43

NEMCHINOV, A.A., kand. sel'khoz. nauk; KAZANSKIY, M.M., red.;
SMIRNOV, P.S., tekhn. red.

[Recent developments in the use of peat as a fertilizer]
Novoe v ispol'zovanii torfa na udobrenie. Leningrad, Len-
izdat, 1948. 44 p. (MIRA 16:8)
(Fertilizers and manures) (Peat)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721320006-0

KAZANSKIY, M.M., kand. fiz.-matem. nauk (Leningrad)

Gulf Stream. Priroda 52 no.11:102-104 '63. (MIRA 17:1)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721320006-0"

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CIA-RDP86-00513R000721320006-0

KAZANSKIY M. M.
Mikhail Mikhaylovich
DAIRY IND.

DECEASED

c. 193

1964
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APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721320006-0"

TSVETKOV, Boris Nikolayevich; KAZANSKIY, M.M., red.; POL'SKAYA, R.G.,
tekhn. red.

[Legal regulation of lumbering operations] Pravovoe reguliro-
vanie lesozagotovitel'nykh rabot. Izd.2., perer. Leningrad,
Lenizdat, 1961. 110 p. (MIRA 15:1)
(Lumber—Law and legislation)

KAZANSKII, M.

~~Kazanskii, M., and Yagupov, P. ARTIFICIAL DRYING OF
RAW REFRACTORIES FOR GLASSMELTING FURNACES. Keram.
i. Seleno, 8(1) 21 (1937).—A discussion is given of (1) con-
ditions of drying of raw refractory products, (2) experi-
ments with drying at the Lenzov works, (3) accelerated
drying in installations with multiple feeding, and (4)
adaptability of such driers for drying refractory products.~~

KAZANSKII, M. S.

Kazanskii, M. S., and Yagupov, P. P. ARTIFICIAL DRYING OF FIREBRICK.
Keram. i. Steklo, 9 (8) 5-9 (1933).--The economical advantages of artificial
drying of refractories for glass furnaces are examined.

"APPROVED FOR RELEASE: 06/13/2000

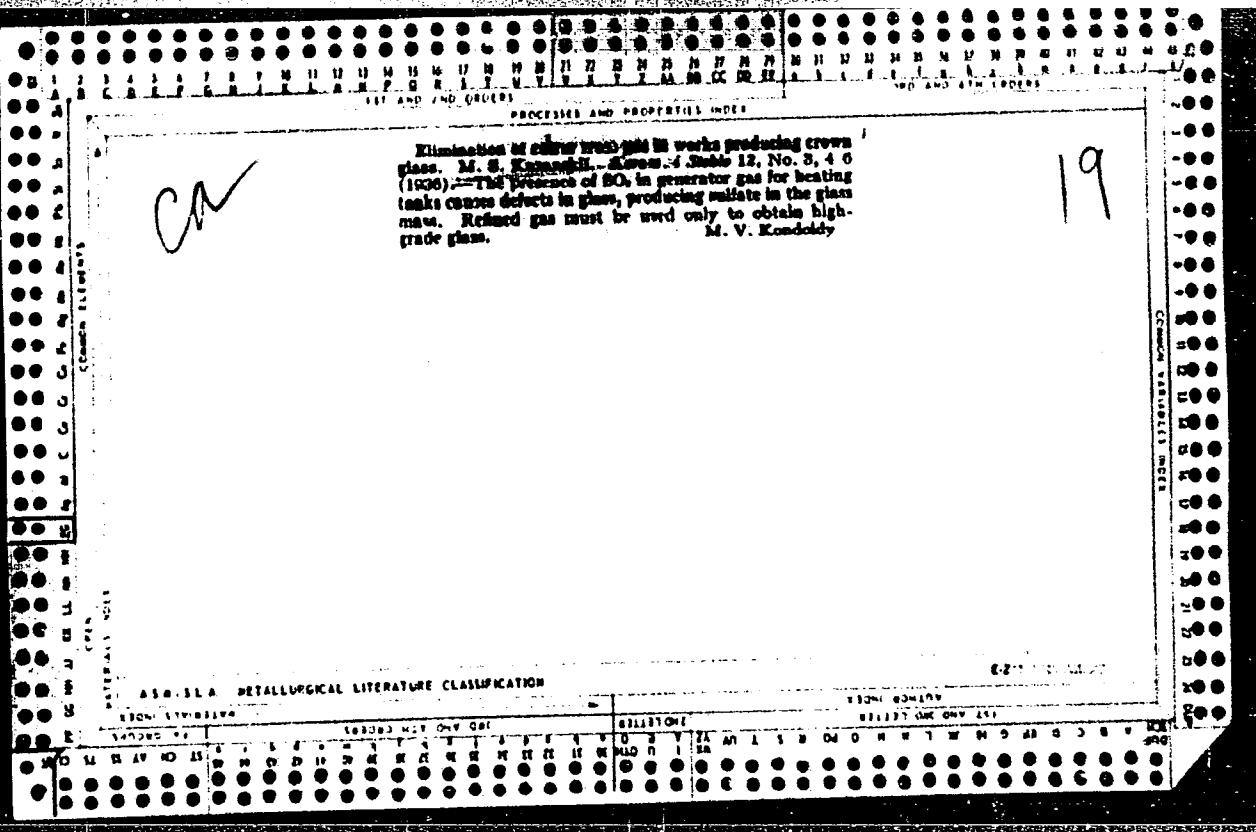
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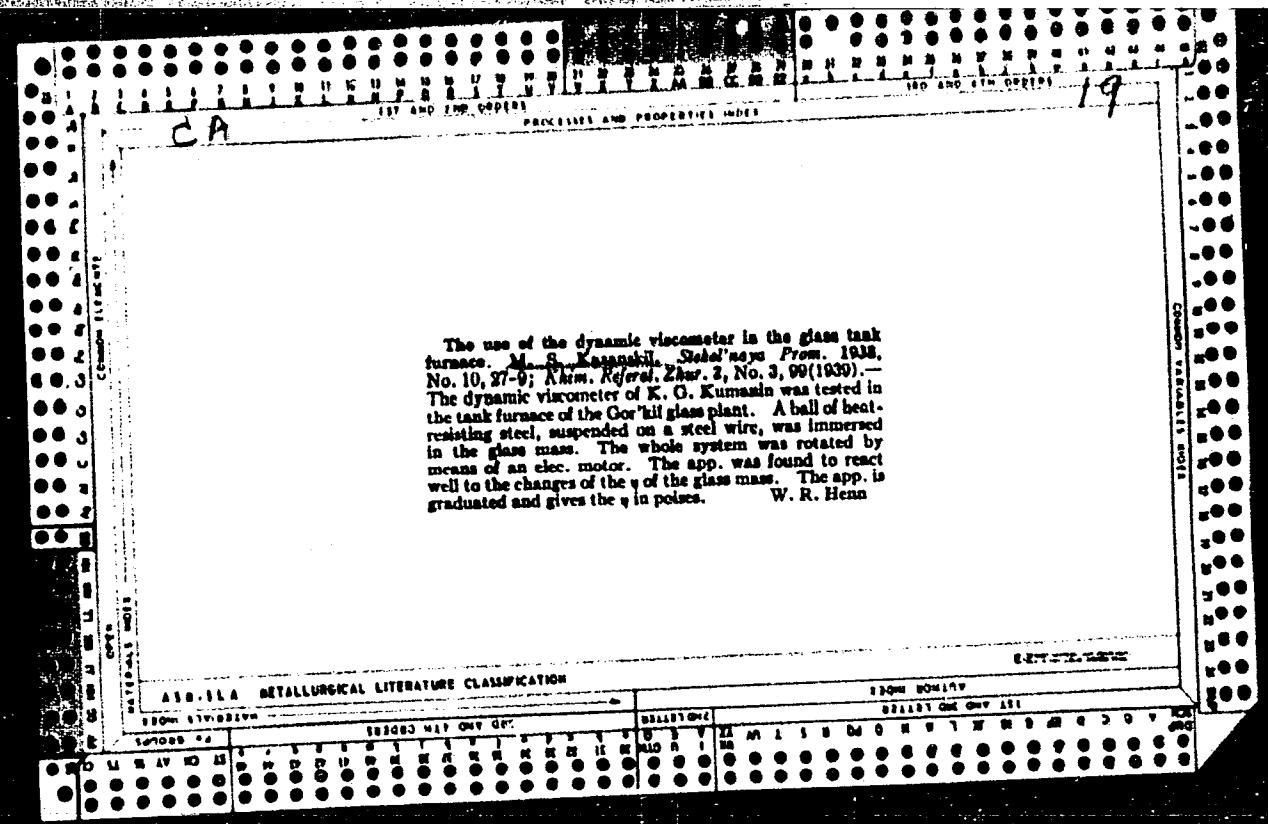
KAZANSKII, M.

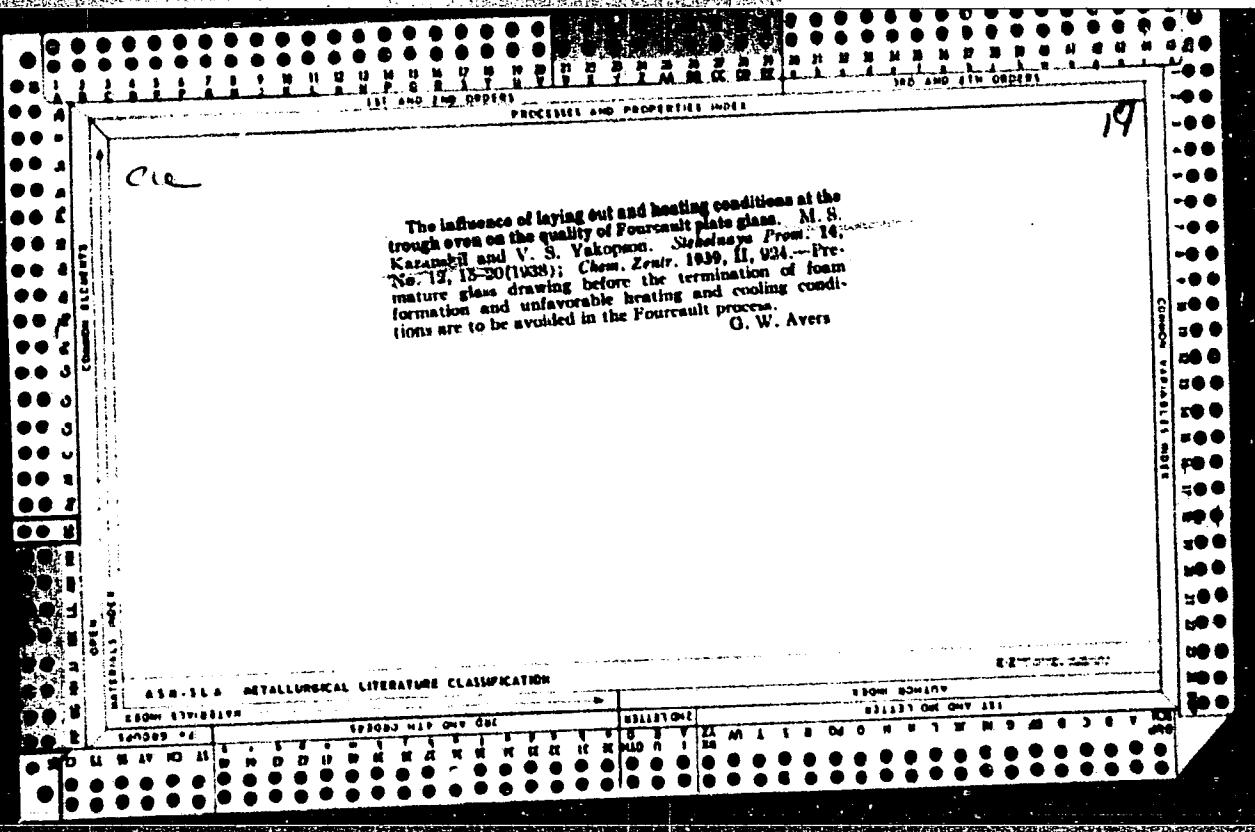
Kazanskii, M. ARTIFICIAL DRYING OF GROC REFRACTION
TOKIBS FOR THE GLASS INDUSTRY. Ogneupory, 3, 815-27
(1936).

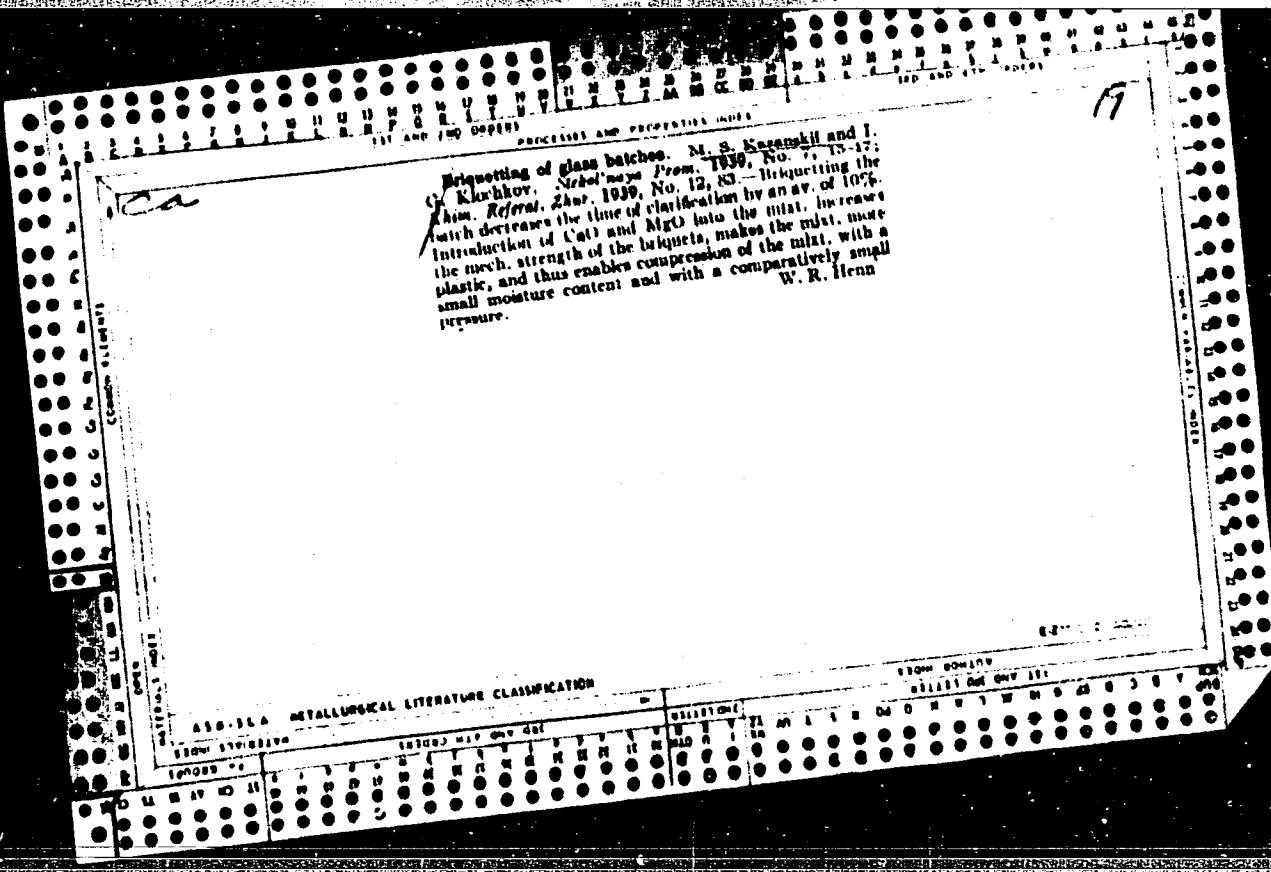
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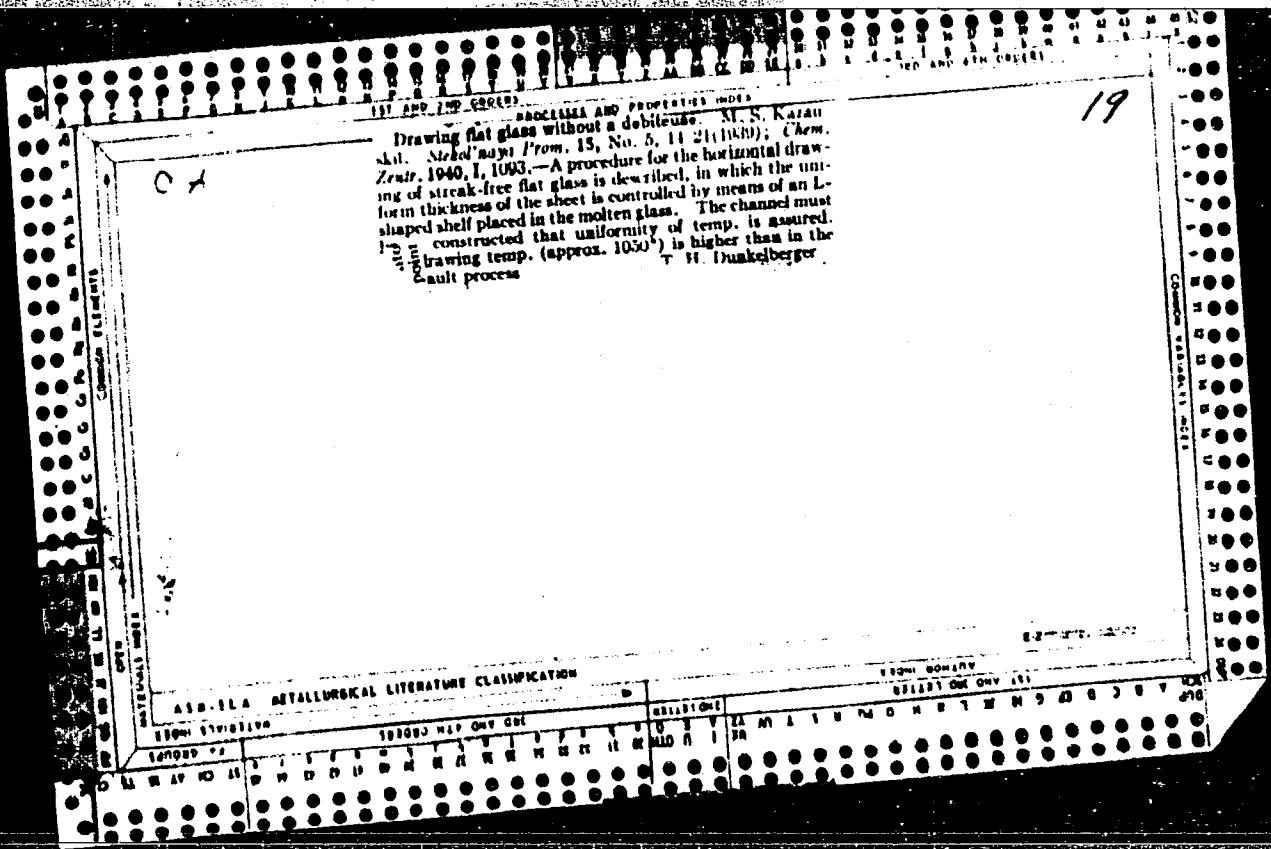
CIA-RDP86-00513R000721320006-0"

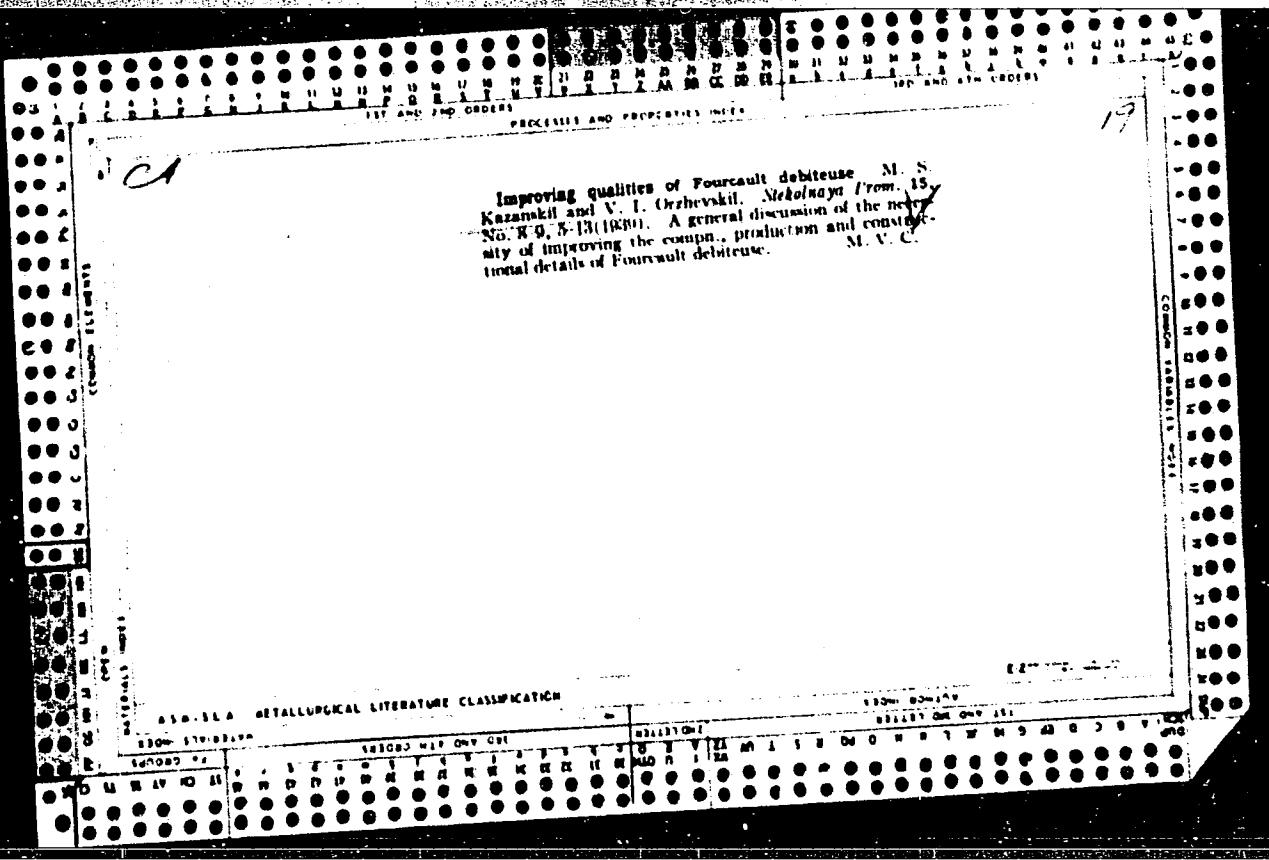












March 12th 1986

KAZANSKII M. S.

USSR/Glass - Finishing
Efficiency, Industrial

"The Experiment of the 'Sarkandaugava' Plant for Speed-up Glass Ribbon Drawing," D. L. Gik,
M. S. Kazanskiy, Candidates in Technical Sciences, 11 pp

"Stekol(naya i Keramicheskaya Promyshlennost'" No 3

Technical description of equipment, working conditions, properties of glass used, and complete details of the Furko machines used in above plant which took first place in a socialist competition.

PA 10T42

R. J. Fine Ceramics
Spectacles

July 26

Planning of mixing glasses [at glass works]. M. S. Kasinski.
(Stek. Krem., 1948, 7; Brit. ceram. Assoc., 1949, 163 A).—The
scheme adopted at a Russian glassworks for controlling and storing
raw materials and analysing and blending the constituents of glass
mixes is outlined.

KAZANSKIY, N. (UA3AF)

Shortwave competitions in Europe. Radio no. 313 K-14
(KIRA 17:1)

KAZANSKIY, N. (UA2AF)

Radio amateurs of Revda. Radio no. A:10 Ap 16.
(MFA 17:9)

Kalinin, N. (classical literary criticism)

Original printout R. S. Remond, 1971

(URSS 1812)

L. Sovetsky, Sekretar' Politicheskoy komissii SSSR.

KAZANSKIY, N. (UA3AF)

Results of the discussion of proposed new standards. Radio
no.9:14 S '64. (MIRA 17:12)

1. Otvetstvennyy sekretar' Federatsii radiosporta SSSR.

KAZANSKIY, N., sud'ya Vsesoyuznoy kategorii; LYKOV, V., sud'ya Vsesoyuznoy kategorii

In anticipation of the finals. Radio no.12:8-9 D '64.

(MIRA 18:3)

KAZANSKIY, N.

Effective new norms. Radio n. 249 F 165.

(MIRA 18:4)

I. Otvetskiy sekretar' Radiosporta SSSR.

KAZANSKIY, N., zasluzhennyy trener SSSR

Advice to the beginners. Radio no.3:12 Mr '65.

(MIRA 18:6)

KAZANSKIY, N.

There is still time. Radio no. 4:18-20 Ap '65.

(MIRA 18:5)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721320006-0

KAZANSKIY, N.

"People's laboratory" in action. Radio no. 5:38 My '65. (MIRA 18:5)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721320006-0"

KAZANSKIY, N.

Anyone may enjoy it. Radio no. 6:11-12 Je '65.

(MIRA 18:10)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721320006-0

KAZANSKIY, N., sud'ya vsesoyuznoy kategorii

Victories of Viktor Pravkin. Radio no.10:11-12 0 '65.
(MIRA 18:12)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721320006-0"

KAZANSKIY, N., zasluzhenny trener SSSR

Through the eyes of a trainer. Radio no.1:12-14 Ja '66.
(MIRA 19:1)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721320006-0

KAZANSKIY, M., zasluzhennyy trener SSSR

"Hunters" from greater Moscow at the finish. Radio no.9:
8-9 S '65. (MTA 19:1)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721320006-0"

KH3 PNSK1Y MA.

KRYLOV, Vladimir Neofanovich; KAZANSKIY, N.A., red.; TARAYEVA, Ye.K., red.
izd-va; TSYTYERMAN, T.M., tekhn. red.

[Storage of and accounting for materials and equipment in construction
warehouses] Khranenie i uchet materialov i oborudovaniia na skladakh
stroitel'stva. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i
stroit. materialam, 1958. 265 p. (MIRA 11:7)
(Building materials)

KAZANSKIY, N.A.

~~KAZANSKIY, N.A., inzhener, nauchnyy redaktor; BEGAK, B.A., redaktor;~~
~~PERSON, M.N., tekhnicheskiy redaktor~~

[Planning the organization and technology of production in industrial and municipal residential construction; fundamental aspects] Proektirovanie organizatsii i tekhnologii proizvodstva rabot v promyshlennom i zhilishchno-grazhdanskem stroitel'stve; osnovnye polozheniya. Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1954. 30 p.

(MLRA 7:9)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii i mekhanizatsii stroitel'stva.
(Building)

KAZANSKIY, N. A.

"Division Into Districts of the Far East and East Siberia on the Basis of the Origin of Vegetation." Thesis for degree of Cand. Geographical Sci. Sub 28 Mar 50, Moscow Oblast Pedagogical Inst.

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

KAZANSKIY, N. A.

USSR (600)

Agriculture & Plant & Animal Industry.

Forester's and forest ranger's handbook. Moskva, Goslesbumizdat, 1951.

Monthly List of Russian Accessions, Library of Congress, April 1952. UNCLASSIFIED.

KOLOMOYEV, N. A. (Ph.D.)

KOLOMOYEV, N. A. (Ph.D.) -- "Experience with new Cultivation Practices in the Kalyazino Forest District." Sub. "Forestry, New Forest Engineering Inst." (Dissertation for the degree of Doctor in Agricultural Sciences).

Sc: Yechernaya Moskva January-December 1982

1. KAZANSKIY, N.A.
2. USSR (600)
4. Forest Management
7. Experiment in using new methods of improvement cutting. Les. khoz. 5 no. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified

USSR / Forestry. Forest Management.

K

Abs Jour: Ref Zhur-Biol., No 7, 1958, 29556.

Author : Kazanskiy, N. A.

Inst : Moscow Technical Forestry Institute.

Title : An Attempt to Apply the Clearing Method for
Reconstituting the Forests Around Moscow and
Renewing the Oak Groves.

(Opyt primeneniya metoda osvobozhdeniya dlya
rekonstruktsii podmoskovnykh lesov i vosstan-
ovleniya dubrav).

Orig Pub: Nauchn. tr. Mosk. lesotekhn. in-t, 1957, vyp. 5,
55-64.

Abstract: The test made in the Malakhovskoye forestry of
the Ramenskiy timber grounds applying the method
of clearing (according to V.G. Nesterov) for
reconstituting plantings and renewing oak groves

Card 1/2

52

USSR/Engineering - Construction,
Equipment

1 Jun 52

"Double-Action Vibrator for Making Holes in Ground,"
N. I. Kazanskiy, Engr., DIBI
PA 228175

"Byul Stroit Tekh", No 11, p 10,
Describes depth vibrator for making holes for piles.
Vibrator, designed and tested by author, is built
in ground in order to compact ground under struc-
ture to be erected. States that disturbing force
acts simultaneously or alternately in vertical and
radial directions. Gives kinematic diagram and
design characteristics.

228175

KAZANSKIY, N. I.

USSR (600)

Earthwork

Subsurface hydraulic vibratory compression of loess. Stroi. prom., 30, No. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

1. KAZANSKIY, N. M.
2. USSR (600)
4. Wood Finishing
7. Practical manual for finishing furniture ("Furniture finishing." G. L. Mishchenko. Reviewed by N. M. Kazanskiy). Der. i lesokhim. prom. 2, No. 5, 1953.
9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.

KAZANSKIY, N.M. inzhener; DYADIN, A.A., inzhener.

Introducing a new method for finishing furniture at Factory No.1 of the
Moscow Municipal Furniture Industry. Der. i lesokhin.prom. 2 no.10:24-27
0 '53.
(MLRA 6:9)

1. Moskovskaya mebel'naya fabrika No.1 tresta Mosgormebel'prom (for Kazanskiy).
2. Opytno-eksperimental'nyy zavod TsNIIKhI (for Dyadin).
(Veneers and veneering)

DEMESHIN, P.I.; KAZANSKIY, N.M., redaktor; VOROB'YEVA, N.N., redaktor;
KARASIK, N.P., tekhnicheskiy redaktor

[Cabinetnetwork] Konstruirovaniye stoliarnykh izdelii. Moskva, Gosles-
bumizdat, 1954. 279 p.
(Cabinetnetwork) (MLRA 7:9)

KAZANSKIY, N.N.

Effect of the construction of the Bratsk Hydroelectric Power
Station on agricultural development in the middle Angara Valley.
Izv. AN SSSR, Ser. Geog. no.3:32-47 My-Je '57. (MIRA 10:12)

1. Institut kompleksnykh transportnykh problem AN SSSR,
(Angara Valley--Agriculture)
(Bratsk Hydroelectric Power Station)

KAZANSKIY, N.N.

Economic regionalization of Siberia. Vop. geog. no.47:133-144
'59. (MIRA 13:1)
(Siberia--Economic zoning)

KAZANSKIY, N.N.

Studying the transportation of economic regions. Izv. AN
SSSR. Ser. geog. no.6:58-66 N.D '61. (MIRA 14:12)

1. Institut kompleksnykh transportnykh problem Gosekonomsoveta
SSSR.
(Transportation)

VARLAMOV, V.S.; KAZANSKIY, M.N.; SEMENOV, P.Ye.

"Transportation geography of the U.S.S.R." by I.V. Nikol'skii.
Reviewed by V.S. Varlamov, N.N. Kazanskii. Geog. i khoz. no.9:
82-83 '61. (MIRA 14:11)

(Transportation)
(Nikol'skii, I.V.)

KAZANSKIY, N.N.

Comprehensive development of the economic regions of the U.S.S.R.
and problems of the distribution of transportation. Izv. AN SSSR.
Ser. geog. no.2:76-82 Mr-Ap '65. (MIRA 18:4)

1. Institut kompleksnykh transportnykh problem pri Gosplane SSSR.

BELOUSOV, I.I.; KAZANSKIY, N.N.; VARLAMOV, V.S.

Future development of interregional relations and freight traffic.
Vop. geog. no.57:147-179 '62. (MIRA 15:10)
(Transportation) (Freight and freightage)

KAZANSKIY, N.N.

Economic development of the southern part of Eastern Siberia
and the problem of transportation. Sib.geog.sbor. no.1:69-76
'62. (MIRA 16:2)

(Siberia, Eastern--Transportation)
(Siberia, Eastern--Economic policy)

KAZANSKIY, N.N.; LASIS, Yu.V.

Methods for determining the flow of traffic to serve as the
basis for developing the transportation system. Vop. geog.
no.61:5-23 '63. (MIRA 16:6)

(Freight and freightage)

VARLAMOV, V.S.; KAZANSKIY, N.N.

Average length of freight haul by railways in the future.
Vop. geog. no.61:24-33 '63. (MIRA 16:6)

(Railroads—Freight)

DOLGOPOLOV, G.V.; KAZANSKIY, N.N.; KRYUCHKOV, V.G.; MAYERGOIZ, I.I.;
MINTS, A.A.; NAZAREVSKIY, O.R.; PETRYAYEVA, D.A.; POKSHISHEVSKIY,
V.V.; PRIVALOVSKAYA, G.A.; PULYARKIN, V.A.; RYAZANTSEV, S.N.;
FREYKIN, Z.G.; KHOREV, B.S.

Gennadii Petrovich Matveev; obituary. Izv. AN SSSR. Ser. geog.
no.6:144-145 N-D '62. (MIRA 15:12)
(Matveev, Gennadii Petrovich, 1926-1962)

KAZANSKIY, N.N.

Settlement of the middle Angara Valley in connection with the
development of the region. Sib. geog. sbor. no.2:170-195 '63.
(MIRA 16:11)

KAZANSKIY, N.P.

An unusual case of atrioventricular block. Sov.med. 22 no.10:
118-119 O '58 (MIRA 11:11)

1. Iz terapeuticheskogo otdeleniya (zav. N.P. Kazanskiy)
1-y Michurinskoy gorodskoy bol'nitsy (glavnnyy vrach A.N. Kukin),
(HEART, BLOCK, case reports
AV block (Rus))

KAZANSKIY, N.P.

Takayasu disease. Sov.med. 24 no.9:122 8 '60. (MIRA 13:11)

1. Iz terapevticheskogo otdeleniya (zav. - zasluzhennyj vrach
RSFSR N.P. Kazanskiy) 1-y Michurinskoy gorodskoy bol'nitsy
(glavnnyj vrach A.N. Kukin).
(AORTA--DISEASES)

LUK'YANOV, Nikolay Vasil'yevich; KAZANSKIY, N.V., red.; DOLGOVA,
K.N., red. izd-va; LELYUKHIN, A.A., tekhn. red.

[Mechanization of the principal repair and building opera-
tions] Mekhanizatsiya osnovnykh remontno-stroitel'nykh rabot.
Moskva, Izd-vo M-va kommun. khoz. RSFSR, 1962. 141 p.
(MIRA 16:1)
(Apartment houses--Maintenance and repair)

DAYDBEKOV, Sitazhutdin Daidbekovich, kand. tekhn. nauk; KAZANSKIY, N.V.,
red.; YEVDOKIMOVA, Ye.D., red.izd-va; LELYUKHIN, A.A., tekhn.red.

[Restoring wooden roofs and floors] Vosstanovlenie dereviannykh
pokrytii i perekrytii. Izd.2., perer. Moskva, Izd-vo M-va kom-
mun.khoz.RSFSR, 1962. 121 p. (MIRA 16:2)
(Building--Repair and reconstruction)

KAZANSKIY, Nikolay Vasil'yevich; PROKOF'YEV, Vasiliy Ivanovich;
IVANOV, V.P., red.; DOLGOVA, K.N., red. izd-va; KHENOKH,
F.M., tekhn. red.

[Manual on safety measures for the demolition of buildings
and structures] Pamiatka po tekhnike bezopasnosti pri raz-
borke zdani i sooruzhenii. Moskva, Izd-vo MKKh, 1963. 74 p.
(MIRA 16:7)

(Building—Safety measures)